

REMARKS

Claims 1-40 were pending in the application. Claims 1-28 were elected for prosecution. To further the prosecution of this application the applicant has now made amendments in the claims that are believed to place all claims in condition for allowance. Several claims, including non-elected claims 29-40 have been canceled from the application. All amended claims are believed to clearly patentably distinguish over the cited and referenced prior art.

Claims 1-5 and 7-10 have been rejected under 35 U.S.C. 102 (b) as being anticipated by Ben-Haim (U.S. Patent No. 5,480,422.) The Office has taken the position that Ben-Haim shows obtaining physiological information of an internal site and superimposing a map of that information on an image of the region of interest. Ben-Haim discloses a system for the treatment of cardiac arrhythmias, and discusses superimposing an image of the catheter on a heart chamber image disclosing wall architecture. (See Ben-Haim column 3, lines 65-67, and column 4, lines 7-19.) The electrophysiological signal processor 60 shown in Figure 5 is not disclosed as providing an "image", but instead is disclosed as providing "an activation time delay". (See column 12, lines 1-14 and Figure 5.) Ben-Haim discloses that the display 66 "permits visual portrayal of the local activation times at the location of the catheter tip as described earlier, for example, by superimposition with an ultrasound image showing the heart chamber architecture". In contrast to the separate body structure and instrument images discussed by Ben-Haim, the present invention superimposes body structure images. Claim 1 has been even further amended to distinguish over Ben-Haim.

Claims 6 and 11-28 have been rejected under 35 U.S.C. 103 (c) as being unpatentable over Ben-Haim in view of Wilk (U.S. Patent No. 5,217,003.) Claims 6, 11-13, 15-20, 22, 25-26, and 28 have been canceled. Claims 21, 23 and 27 are all directly or indirectly dependent on Claim 1. The amendments now made to claim 1 clearly distinguish the present invention over Ben-Haim whether taken alone or in combination with Wilk. Accordingly, dependent claims 21, 23 and 17 should be in condition for allowance.

One of the unique features of the present invention is the combination of image display and corresponding feedback. This enables the surgeon to, not only observe the body structure of interest, but also provides a tactile feedback to the surgeon based upon the sensor signal. This

feature is clearly not found in the cited prior art. Claim 1 has now been amended to include a master station that includes a user interface; a slave station that includes a medical implement; a sensor on the medical implement positionable at an internal body site for sensing a non-visible field of a body structure at the site; a measurement system responsive to the sensor for providing a sensor signal indicative of the field strength; a controller intercoupling the master and slave stations and responsive to manipulations at the user interface by the medical practitioner to control the medical implement; wherein the controller transforms the sensor signal into virtual image data representative of the body structure; a source of visual image data for the site; and a display system enabling combined display of the visual image data and the virtual image data for observation by the medical practitioner at the master station. Claim 1 also defines the controller as “transforming the sensor signal into a tactile feedback signal, said user interface receiving said feedback signal for providing a tactile response to the medical practitioner at the user interface”. Again, the prior art does not show this claimed combination. Accordingly, claim 1, the only remaining independent claim in the application, should be in condition for allowance.

Claims 6, 10-13, 15-20, 22, 25, 26 and 28-40 have now all been canceled from the application. Minor amendments have been made in some of the other remaining dependent claims. Claims 2-5, 7-9, 14, 21, 23, 24 and 27 remain as claims dependent, directly or indirectly, to claim 1. These dependent claims should be allowable at least for the same reasons as claim 1 is allowable.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,
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